

ANNEX NO. 3  
TO  
REIMBURSABLE UMBRELLA SPACE ACT AGREEMENT, SAA1-31764  
BETWEEN  
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
LANGLEY RESEARCH CENTER  
AND  
THE NATIONAL INSTITUTE OF AEROSPACE  
FOR  
LABORATORY AND FACILITY USE FOR BORON NITRIDE NANOTUBE (BNNT)  
RESEARCH

ARTICLE 1. PURPOSE OF ANNEX

The National Institute of Aerospace (NIA) and the National Aeronautics and Space Administration (NASA), Langley Research Center (LaRC), are co-inventors of multiple pieces of intellectual property related to the manufacture and study of Boron Nitride Nanotubes (BNNTs). As partners in the development of this technology, a mutual interest in its continued advancement exists. This Annex shall be for the purpose of supporting collaborative research activities to include the NASA Langley BNNT research team within the Advanced Materials and Processing Branch (AMPB) and externally-funded NIA researchers. Over the duration of this annex, NIA staff and a graduate student from the North Carolina State University (NCSU) will sit on-site at NASA LaRC and make use of the laboratory facilities and equipment within the AMPB, to study the structure and the material properties of BNNTs and their nanocomposite materials for extreme environment applications and technologies.

This activity does not constitute competition with any commercial entity, as the High Temperature Pressure method for the manufacture of BNNTs was developed, and the intellectual property rights to the method are jointly held, by NASA Langley, NIA, and the Jefferson National Laboratories.

The legal authority for this Annex, consistent with the Umbrella Agreement, is in accordance with the National Aeronautics and Space Act (51 U.S.C. § 20113(e)).

ARTICLE 2. RESPONSIBILITIES

A. NASA LaRC will use reasonable efforts to:

1. Provide office space and computer facilities/access to an identified NIA staff member and an NIA-affiliated graduate student for purposes of BNNT collaboration.
2. Provide access to and use of a neutron radiation exposure facility, electroactive composites research laboratory, wet chemical laboratory, and associated analytical test equipment.

3. Provide general oversight and instruction in the usage of the facilities and equipment described in this Article to ensure proper operation and functioning of the facilities and equipment.
4. NASA will ensure that NIA affiliated personnel are fully trained and qualified, by NASA personnel, in the operation of any NASA equipment prior to their authorization for its use. Otherwise, all operations will be performed jointly with NASA personnel.
5. Keep the instrumentation and equipment described in this Article in a proper functioning condition.

B. Partner will use reasonable efforts to:

1. Utilize the facilities and equipment in a manner that minimizes disruption of normal facility and equipment operations.
2. Operate all laboratory equipment in accordance with proper operating procedures and follow NASA lab personnel instructions on usage of the equipment.
3. Exercise NASA safety requirements for work in a lab of this type.
4. Comply with all NASA and LaRC requirements for foreign nationals to obtain access to and use of NASA facilities.
5. Provide a monthly report to NASA LaRC of the facility hours expended in support of this Annex and official notification once 25 facility hours have been expended.

### ARTICLE 3. SCHEDULE AND MILESTONES

Milestones are contingent upon the participants having access to LaRC to conduct the activities. Should COVID-19 cause delays to the milestones, LaRC and Partner will negotiate new mutually agreed upon milestone dates to be included in a modification to this Annex

The planned major milestones for the activities for this Annex defined in the "Responsibilities" Article are as follows:

NASA LaRC will provide access to office space in B1293C and ACES Computer Seat for student.	Beginning on the effective date of this Annex through September 30, 2021
NASA LaRC will provide access to material characterization facility, i.e. high-resolution SEM, FT-IR spectroscopy, and thermo-gravimetric analyzer, in B1293C and B1205 for up to thirty (30) hours cumulative among the three (3) instruments noted.	Beginning on the effective date of this Annex through September 30, 2021
NASA LaRC will provide access to the wet laboratory in B1293C, R262, for material fabrication for up to thirty (30) hours.	Beginning on the effective date of this Annex through September 30, 2021

NIA will provide official notification to NASA LaRC, AMPB once 25 hours of the designated 30 hours of facility usage has been expended.	No later than the beginning of the month subsequent to that in which the 25-hour threshold is reached.
NIA shall provide a monthly facility use report to NASA LaRC, AMPB.	No later than five (5) business days following the last day of the month throughout the term of this Annex.

#### ARTICLE 4. FINANCIAL OBLIGATIONS

A. Partner agrees to reimburse NASA an estimated cost of \$5,163 for NASA to carry out its responsibilities under this Annex. Each payment shall be marked with [SAA1-31764-Annex 3].

B. NASA will not provide services or incur costs beyond the current funding. Although NASA has made a good faith effort to accurately estimate its costs, it is understood that NASA provides no assurance that the proposed effort under this Annex will be accomplished for the estimated amount. Should the effort cost more than the estimate, Partner will be advised by NASA as soon as possible. Partner shall pay all costs incurred and have the option of canceling the remaining effort or providing additional funding in order to continue the proposed effort under the revised estimate. Should this Annex be terminated, or the effort completed at a cost less than the agreed-to estimated cost, NASA shall account for any unspent funds within [insert timeframe, cannot exceed one year] after completion of all effort under this Annex, and promptly thereafter, at Partner's option return any unspent funds to Partner or apply any such unspent funds to other activities under the Umbrella Agreement. Return of unspent funds will be processed via Electronic Funds Transfer (EFT) in accordance with 31 C.F.R. Part 208 and, upon request by NASA, Partner agrees to complete the Automated Clearing House (ACH) Vendor/Miscellaneous Payment Enrollment Form (SF 3881).

#### ARTICLE 5. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

- A. Per agreement with the NIA, data generated as a result of this research activity will be fully- shared with the NASA LaRC BNNT research team.
- B. Data produced under this Annex that is subject to paragraph C. of the Intellectual Property Rights- Data Rights Article of the Umbrella Agreement will be protected for the period of one (1) year.
- C. In accordance with paragraph H. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement, Disclosing Party provides the following Data to Receiving Party. The list below may not be comprehensive, and subject to change, and does not supersede any restrictive notice on the Data provided.
  - 1. Background Data: *None*
  - 2. Third Party Proprietary Data: *None*

3. Controlled Government Data: *None*
4. The following software and related Data will be provided to Partner under a separate Usage Agreement: *None*

#### ARTICLE 6. TERM OF ANNEX

This Annex becomes effective October 1, 2020 ("Effective Date") and shall remain in effect until September 30, 2021, whichever comes first, unless such term exceeds the duration of the Umbrella Agreement. The term of this Annex shall not exceed the term of the Umbrella Agreement. The Annex automatically expires upon the expiration of the Umbrella Agreement.

#### ARTICLE 7. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Annex by providing thirty (30) calendar days written notice to the other Party.

#### ARTICLE 8. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Annex.

Management Points of Contact	
<u>NASA Langley Research Center</u> Catharine C. Fay Branch Head, Advanced Materials and Processing Mail Stop: 226 Langley Research Center Hampton, VA 23681 Phone: (757) 864-4296 catharine.c.fay@nasa.gov	<u>National Institute of Aerospace</u> David A. Throckmorton Vice President for Research 100 Exploration Way Hampton, VA, VA 23666-6186 Phone: (757) 325-6724 david.throckmorton@nianet.org

#### ARTICLE 9. MODIFICATIONS

Any modification to this Annex shall be executed, in writing, and signed by an authorized representative of NASA and the Partner. Modification of an Annex does not modify the terms of the Umbrella Agreement.

ARTICLE 10. SIGNATORY AUTHORITY

The signatories to this Annex covenant and warrant that they have authority to execute this Annex. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND  
SPACE ADMINISTRATION  
LANGLEY RESEARCH CENTER

NATIONAL INSTITUTE OF  
AEROSPACE

BY: \_\_\_\_\_  
David Dress  
Director, Space Technology and  
Exploration Directorate

BY: Karl L. Drews \_\_\_\_\_  
Karl L. Drews, JD  
Vice President for Legal Affairs

DATE: \_\_\_\_\_

DATE: 01 SEP 20 \_\_\_\_\_